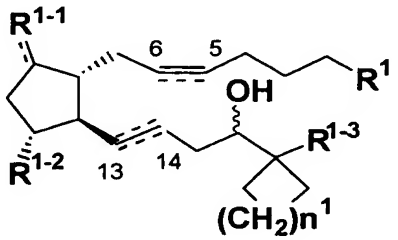
CLAIMS

1. An agent for preventing and/or treating spinal canal stenosis which comprises a combination of a compound having EP2 agonist action and a compound having EP3 agonist action.

2. The agent for preventing and/or treating spinal canal stenosis according to claim 1, wherein the compound having EP2 agonist action and the compound having EP3 agonist action are each administrated.

3. The agent for preventing and/or treating spinal canal stenosis according to claim 1, wherein the compound having EP2 agonist action and the compound having EP3 agonist action are comprised in the same preparation.

4. The agent for preventing and/or treating spinal canal stenosis according to claim 1, wherein the compound having EP2 agonist action is a compound represented by formula (I)



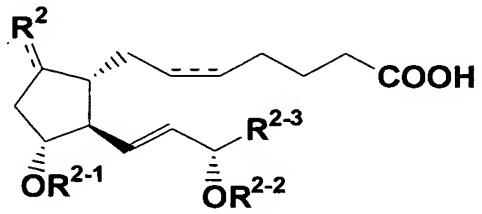
(I)

wherein R^1 is carboxy or hydroxymethyl; R^{1-1} is oxo, methylene or a halogen atom; R^{1-2} is a hydrogen atom, hydroxy or C1-4 alkoxy; R^{1-3} is a hydrogen atom, C1-8 alkyl, C2-8 alkenyl, C2-8 alkynyl, or C1-8 alkyl, C2-8 alkenyl or C2-8 alkynyl substituted by 1-3 of substituents selected from the following (1) to (5): (1) a halogen atom, (2) C1-4 alkoxy, (3) C3-7 cycloalkyl, (4) phenyl or (5) phenyl substituted

by 1-3 of substituents selected from a halogen atom, C1-4 alkyl, C1-4 alkoxy, nitro or trifluoromethyl; n^1 is 0 or 1-4; ---- is a single bond or a double bond; ---- is a double bond or a triple bond; ---- is a single bond, a double bond or a triple bond; ~~~ is α-configuration, β-configuration or a mixture of them,

a salt thereof, a solvate thereof or a prodrug thereof, or a cyclodextrin clathrate thereof.

5. The agent for preventing and/or treating spinal canal stenosis according to claim 1, wherein the compound having EP3 agonist action is a compound represented by formula (II)

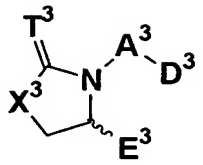


(II)

wherein R^2 is oxo or a halogen atom; R^{2-1} and R^{2-2} are each independently C1-4 alkyl; R^{2-3} is C1-10 alkyl, C2-10 alkenylene, C2-10 alkynylene, or C1-10 alkyl, C2-10 alkenylene, C2-10 alkynylene substituted by phenyl, phenoxy, C3-7 cycloalkyl or C3-7 cycloalkyloxy, in which the phenyl and the cycloalkyl may be substituted by 1-3 of C1-4 alkyl, C1-4 alkoxy, a halogen atom, trihalomethyl or nitro; ---- is a single bond or a double bond,

a salt thereof, a solvate thereof or a prodrug thereof, or cyclodextrin clathrate thereof.

6. The agent for preventing and/or treating spinal canal stenosis according to claim 1, wherein the compound having EP2 agonist action is a compound represented by formula (III)



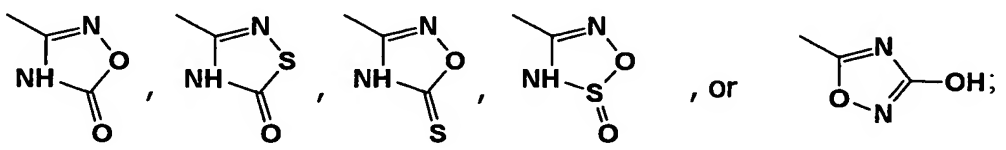
(III)

wherein T^3 is (1) an oxygen atom or (2) a sulfur atom;

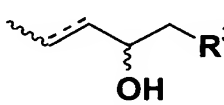
X^3 is (1) $-CH_2-$, (2) -O- or (3) -S-;

A^3 is A^{3-1} or A^{3-2}; A^{3-1} is (1) C2-8 straight-chain alkylene optionally substituted by 1 to 2 C1-4 alkyl, (2) C2-8 straight-chain alkenylene optionally substituted by 1 to 2 C1-4 alkyl or (3) C2-8 straight-chain alkynylene optionally substituted by 1 to 2 C1-4 alkyl; A^{3-2} is $-G^{3-1}-G^{3-2}-G^{3-3}-$; G^{3-1} is (1) C1-4 straight-chain alkylene optionally substituted by 1 to 2 C1-4 alkyl, (2) C2-4 straight-chain alkenylene optionally substituted by 1 to 2 C1-4 alkyl or (3) C2-4 straight-chain alkynylene optionally substituted by 1 to 2 C1-4 alkyl; G^{3-2} is (1) $-Y^3-$, (2) -ring 1^3-, (3) $-Y^3$-ring 1^3-, (4) -ring 1^3-Y^3- or (5) $-Y^3$-C1-4 alkylene-ring 1^3-; Y^3 is (1) -S-, (2) -SO-, (3) $-SO_2-$, (4) -O- or (5) $-NR^{3-1}-$; R^{3-1} is (1) a hydrogen atom, (2) C1-10 alkyl or (3) C2-10 acyl; G^{3-3} is (1) a bond, (2) C1-4 straight-chain alkylene optionally substituted by 1 to 2 C1-4 alkyl, (3) C2-4 straight-chain alkenylene optionally substituted by 1 to 2 C1-4 alkyl or (4) C2-4 straight-chain alkynylene optionally substituted by 1 to 2 C1-4 alkyl;

D^3 is D^{3-1} or D^{3-2}; D^{3-1} is (1) -COOH, (2) $-COOR^{3-2}$, (3) tetrazol-5-yl or (4) $-CONR^{3-3}SO_2R^{3-4}$; R^{3-2} is (1) C1-10 alkyl, (2) phenyl, (3) C1-10 alkyl substituted by phenyl or (4) biphenyl; R^{3-3} is (1) a hydrogen atom or (2) C1-10 alkyl; R^{3-4} is (1) C1-10 alkyl or (2) phenyl; D^{3-2} is (1) $-CH_2OH$, (2) $-CH_2OR^{3-5}$, (3) hydroxy, (4) $-OR^{3-5}$, (5) formyl, (6) $-CONR^{3-6}R^{3-7}$, (7) $-CONR^{3-6}SO_2R^{3-8}$, (8) -CO-(NH-amino acid residue-$CO)_{m3}$-OH, (9)-O-(CO-amino acid residue-$NH)_{m3}$-H, (10) $-COOR^{3-9}$, (11) $-OCO-R^{3-10}$, (12) $-COO-Z^{3-1}-Z^{3-2}-Z^{3-3}$ or

(13) 

R^{3-5} is C1-10 alkyl; R^{3-6} and R^{3-7} are each independently (1) a hydrogen atom or (2) C1-10 alkyl; R^{3-8} is C1-10 alkyl substituted by phenyl; R^{3-9} is (1) C1-10 alkyl substituted by biphenyl optionally substituted by 1 to 3 substituents selected from C1-10 alkyl, C1-10 alkoxy and a halogen atom or (2) biphenyl substituted by 1 to 3 substituents selected from C1-10 alkyl, C1-10 alkoxy and a halogen atom; R^{3-10} is (1) phenyl or (2) C1-10 alkyl; m^3 is 1 or 2; Z^{3-1} is (1) C1-15 alkylene, (2) C2-15 alkenylene or (3) C2-15 alkynylene; Z^{3-2} is (1) -CO-, (2) -OCO-, (3) -COO-, (4) -$CONR^{Z3-1}$-, (5) -$NR^{Z3-2}CO$-, (6) -O-, (7) -S-, (8) -SO_2-, (9) -SO_2-NR^{Z3-2}-, (10) -$NR^{Z3-2}SO_2$-, (11) -NR^{Z3-3}-, (12) -$NR^{Z3-4}CONR^{Z3-5}$-, (13) -$NR^{Z3-6}COO$-, (14) -$OCONR^{Z3-7}$- or (15) -OCOO-; Z^{3-3} is (1) a hydrogen atom, (2) C1-15 alkyl, (3) C2-15 alkenyl, (4) C2-15 alkynyl, (5) ring Z^3 or (6) C1-10 alkyl substituted by C1-10 alkoxy, C1-10 alkylthio, C1-10 alkyl-NR^{Z3-8}- or ring Z^3; ring Z^3 is (1) C3-15 mono-, bi- or tri-carbocyclic aryl which may be partially or fully saturated or (2) 3 to 15 membered mono-, bi- or tri-heterocyclic aryl containing 1 to 4 hetero atoms selected from oxygen, nitrogen and sulfur atom which may be partially or fully saturated; R^{Z3-1}, R^{Z3-2}, R^{Z3-3}, R^{Z3-4}, R^{Z3-5}, R^{Z3-6}, R^{Z3-7} and R^{Z3-8} are each independently a hydrogen atom or C1-15 alkyl, R^{Z3-1} and Z^{3-3} may be taken together with the nitrogen atom to which they are attached to form 5 to 7 membered saturated mono-heterocyclic ring, and the heterocyclic ring may contain other one hetero atom selected from oxygen, nitrogen and sulfur atoms, ring Z^3 and the saturated mono-heterocyclic ring formed by R^{Z3-1}, Z^{3-3} and the nitrogen atom to which they are attached may be substituted by 1-3 groups selected from following (1) to (4); (1) C1-15 alkyl, (2) C2-15 alkenyl, (3) C2-15 alkynyl, (4) C1-10 alkyl substituted by C1-10 alkoxy, C1-10 alkylthio or C1-10 alkyl-NR^{Z3-9}-; R^{Z3-9} is a hydrogen atom or C1-10 alkyl,

E^3 is E^{3-1} or E^{3-2}; E^{3-1} is 

; R^{3-11} is (1) C1-10 alkyl, (2) C1-10 alkylthio, (3) C1-10 alkyl substituted by C3-8 cycloalkyl, (4) C1-10 alkyl substituted by ring 2 or (5) C1-10 alkyl substituted by -W^{3-1}-W^{3-2}-ring 2; W^{3-1} is (1) -O-,

(2) -S-, (3) -SO-, (4) -SO_2-, (5) -$NR^{3\text{-}11\text{-}1}$-, (6) carbonyl, (7) -$NR^{3\text{-}11\text{-}1}SO_2$-, (8) carbonylamino or (9) aminocarbonyl; $R^{3\text{-}11\text{-}1}$ is (1) a hydrogen atom, (2) C1-10 alkyl or (3) C2-10 acyl; $W^{3\text{-}2}$ is (1) a bond or (2) C1-8 alkyl optionally substituted by C1-4 alkyl, a halogen atom or hydroxy; $E^{3\text{-}2}$ is (1) $U^{3\text{-}1}$-$U^{3\text{-}2}$-$U^{3\text{-}3}$ or (2) ring 4^3; $U^{3\text{-}1}$ is (1) C1-4 alkylene, (2) C2-4 alkenylene, (3) C2-4 alkynylene, (4) -ring 3^3-, (5) C1-4 alkylene-ring 3^3-, (6) C2-4 alkenylene-ring 3^3- or (7) C2-4 alkynylene-ring 3^3-; $U^{3\text{-}2}$ is (1) a bond, (2) -CH_2-, (3) -CHOH-, (4) -O-, (5) -S-, (6) -SO-, (7) -SO_2-, (8) -$NR^{3\text{-}12}$-, (9) carbonyl, (10) -$NR^{3\text{-}12}SO_2$-, (11) carbonylamino or (12) aminocarbonyl; $R^{3\text{-}12}$ is (1) a hydrogen atom, (2) C1-10 alkyl or (3) C2-10 acyl; $U^{3\text{-}3}$ is (1) C1-8 alkyl optionally substituted by 1 to 3 substituents selected from C1-10 alkyl, a halogen atom, hydroxy, alkoxy, alkylthio and $NR^{3\text{-}13}R^{3\text{-}14}$, (2) C2-8 alkenyl optionally substituted by 1 to 3 substituents selected from C1-10 alkyl, a halogen atom, hydroxy, alkoxy, alkylthio and $NR^{3\text{-}13}R^{3\text{-}14}$, (3) C2-8 alkynyl optionally substituted by 1 to 3 substituents selected from C1-10 alkyl, a halogen atom, hydroxy, alkoxy, alkylthio and $NR^{3\text{-}13}R^{3\text{-}14}$, (4) C1-8 alkyl substituted by ring 4^3 or (5) ring 4^3; $R^{3\text{-}13}$ and $R^{3\text{-}14}$ are each independently (1) a hydrogen atom or (2) C1-10 alkyl; ring 1^3, ring 2^3, ring 3^3 or ring 4^3 may be substituted by 1 to 5 of R^3; R^3 is (1) C1-10 alkyl, (2) C2-10 alkenyl, (3) C2-10 alkynyl, (4) C1-10 alkoxy, (5) C1-10 alkylthio, (6) a halogen atom, (7) hydroxy, (8) nitro, (9) -$NR^{3\text{-}15}R^{3\text{-}16}$, (10) C1-10 alkyl substituted by C1-10 alkoxy, (11) C1-10 alkyl substituted by 1 to 3 halogen atoms, (12) C1-10 alkyl substituted by C1-10 alkoxy substituted by 1 to 3 halogen atoms, (13) C1-10 alkyl substituted by -$NR^{3\text{-}15}R^{3\text{-}16}$, (14) ring 5^3, (15) -O-ring 5^3, (16) C1-10 alkyl substituted by ring 5^3, (17) C2-10 alkenyl substituted by ring 5^3, (18) C2-10 alkynyl substituted by ring 5^3, (19) C1-10 alkoxy substituted by ring 5^3, (20) C1-10 alkyl substituted by -O-ring 5^3, (21) $COOR^{3\text{-}17}$, (22) C1-10 alkoxy substituted by 1 to 4 halogen atom, (23) formyl, (24) C1-10 alkyl substituted by hydroxy or (25) C2-10 acyl, $R^{3\text{-}15}$; $R^{3\text{-}16}$ and $R^{3\text{-}17}$ are each independently (1) a hydrogen atom or (2) C1-10 alkyl; ring 5^3 may be substituted by 1 to 3 substituents selected from following (1)-(9); (1) C1-

10 alkyl, (2) C2-10 alkenyl, (3) C2-10 alkynyl, (4) C1-10 alkoxy, (5) C1-10 alkyl substituted by C1-10 alkoxy, (6) a halogen atom, (7) hydroxy, (8) C1-10 alkyl substituted by 1 to 3 halogen atoms, (9) C1-10 alkyl substituted by C1-10 alkoxy substituted by 1 to 3 halogen atoms; ring 1^3, ring 2^3, ring 3^3, ring 4^3 and ring 5^3 are each independently (1) C3-15 mono-, bi- or tri-carbocyclic aryl which may be partially or fully saturated or (2) 3 to 15 membered mono-, bi- or tri-heterocyclic aryl containing hetero atoms selected from 1 to 4 nitrogen, 1 to 2 oxygen and/or 1 to 2 sulfur atom which may be partially or fully saturated;  is α-configuration, β-configuration or mixture of them,

a salt thereof, a solvate thereof or a prodrug thereof, or cyclodextrin clathrate thereof.

7. An agent for preventing and/or treating spinal canal stenosis which comprises a compound having EP2 agonist action and EP3 agonist action.

8. The agent for preventing and/or treating spinal canal stenosis according to claim 1 or 7, wherein the spinal canal stenosis is cervical spinal canal stenosis, thoracic spinal canal stenosis, lumbar spinal canal stenosis or wide spinal canal stenosis.

9. The agent for preventing and/or treating spinal canal stenosis according to claim 1 or 7, which is an agent for improving paralysis, hypoesthesia, pain or numbness.

10. The agent for preventing and/or treating spinal canal stenosis according to claim 1 or 7, which is an agent for improving physical ability.

11. The agent for preventing and/or treating spinal canal stenosis according to claim 10, wherein the improving physical ability is improving muscle weakness, intermittent claudication or ambulatory ability.

12. The agent for preventing and/or treating spinal canal stenosis according to claim 1 or 7, which is an agent for treating bladder trouble or rectum trouble.

13. A medicament which comprises a combination of the agent for preventing and/or treating spinal canal stenosis according to claim 1 or 7 and one or more medicaments selected from prostaglandins, prostaglandin derivatives formulations, nonsteroidal anti-inflammatory drugs, vitamins, muscle relaxants, antidepressants, poly ADP-ribose polymerase inhibitors, excitatory amino acid receptor antagonists, radical scavengers, astrocyte modulators, IL-8 receptor antagonists, immunosuppressive drugs, nitric oxide synthase inhibitor and aldose reductase inhibitors.

14. A method for preventing and/or treating spinal canal stenosis in a mammal, which comprises administering to a mammal an effective amount of a compound having EP2 agonist action and a compound having EP3 agonist action, or a compound having EP2 agonist action and EP3 agonist action.

15. Use of a compound having EP2 agonist action and a compound having EP3 agonist action, or a compound having EP2 agonist action and EP3 agonist action for preparation of an agent for preventing and/or treating spinal canal stenosis.